

SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) APPLICANT: Glazer, Peter M.  
Havre, Pamela A.
- (ii) TITLE OF INVENTION: Chemically Modified Oligonucleotide for  
Site-Directed Mutagenesis
- (iii) NUMBER OF SEQUENCES: 13
- (iv) CORRESPONDENCE ADDRESS:
  - (A) ADDRESSEE: Patrea L. Pabst
  - (B) STREET: 1100 Peachtree Street, Suite 2800
  - (C) CITY: Atlanta
  - (D) STATE: Georgia
  - (E) COUNTRY: USA
  - (F) ZIP: 30309-4530
- (v) COMPUTER READABLE FORM:
  - (A) MEDIUM TYPE: Floppy disk
  - (B) COMPUTER: IBM PC compatible
  - (C) OPERATING SYSTEM: PC-DOS/MS-DOS
  - (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
- (vi) CURRENT APPLICATION DATA:
  - (A) APPLICATION NUMBER: US 08/083,088
  - (B) FILING DATE: 25-JUN-1993
  - (C) CLASSIFICATION:
- (viii) ATTORNEY/AGENT INFORMATION:
  - (A) NAME: Pabst, Patrea L.
  - (B) REGISTRATION NUMBER: 31,284
  - (C) REFERENCE/DOCKET NUMBER: YU109
- (ix) TELECOMMUNICATION INFORMATION:
  - (A) TELEPHONE: (404)-815-6508
  - (B) TELEFAX: (404)-815-6555

## (2) INFORMATION FOR SEQ ID NO:1:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: DNA (genomic)

## (iii) HYPOTHETICAL: NO

## (iv) ANTI-SENSE: NO

## (ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 1..11
- (D) OTHER INFORMATION: /function= "N is  
4'-hydroxymethyl-4,5',8-trimethylpsoralen"

## (x) PUBLICATION INFORMATION:

- (A) AUTHORS: Glazer, Peter M.  
Havre, Pamela A.

(K) RELEVANT RESIDUES IN SEQ ID NO:1: FROM 1 TO 11

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

NAGGAAGGG G

## (2) INFORMATION FOR SEQ ID NO:2:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

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- (ii) MOLECULE TYPE: DNA (genomic)
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

AGGAAGGGGG

10

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: DNA (genomic)

- (iii) HYPOTHETICAL: NO

- (iv) ANTI-SENSE: NO

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

GGGGAAGGA

10

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)  
 (iii) HYPOTHETICAL: NO  
 (iv) ANTI-SENSE: NO  
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

CCCCCTTC

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 11 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:

(A) NAME/KEY: misc feature  
 (B) LOCATION: 1..11  
 (D) OTHER INFORMATION: /function= "N is  
 4'-hydroxymethyl-4,5',8-trimethylpsoralen"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

NGGGGGAAGG A

## (2) INFORMATION FOR SEQ ID NO:6:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

GGTTCGAATC CTTCCCCC

18

## (2) INFORMATION FOR SEQ ID NO:7:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

GGTTCGAAAC CTTCCCCC

18

## (2) INFORMATION FOR SEQ ID NO:8:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

TGGTGGTGGG GGAAGGATTC GAACCTTCGA AGTCG

35

## (2) INFORMATION FOR SEQ ID NO:9:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

CGACTTCGAA GGTCGAATC CTTCCCCCACC CACCA

35

## (2) INFORMATION FOR SEQ ID NO:10:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 121 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

## (ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 1..60
- (D) OTHER INFORMATION: /function= "At positions 16 and 57,  
N is G or T."

## (ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 1..121
- (D) OTHER INFORMATION: /function= "At position 17, N is A,  
G or T."

## (ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 1..121
- (D) OTHER INFORMATION: /function= "At position 18, N is A,  
C or T."

## (ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 1..121
- (D) OTHER INFORMATION: /function= "At position 20, N is G  
or A."

## (ix) FEATURE:

- (A) NAME/KEY: misc feature  
 (B) LOCATION: 1..121  
 (D) OTHER INFORMATION: /function= "At position 24, N is C  
 or T."

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

TGGTGGTGGG GGAAGNNNTN GAANCTTCGA AGTCGATGAC GGCAGATTTA GAGTCTNCTC 60  
 CCTTTGGCCG CTCGGGAACC CCACCACAGG TAATGCTTTT ACGGGGGCGA TCATATCAAA 120  
 121

T

## (2) INFORMATION FOR SEQ ID NO:11:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 121 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: DNA (genomic)

## (iii) HYPOTHETICAL: NO

## (iv) ANTI-SENSE: NO

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

ATTTGATATG ATGCGCCCCCG TAAAGCATT ACCTGTGGTG GGGTCCCGA GCGGCCAAAG 60  
 GGAGCAGACT CTAATCTGC CGTCATCGAC TTCGAAGTT CGAATCCTTC CCCCACCACC 120  
 121

A



## (2) INFORMATION FOR SEQ ID NO:12:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 121 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

## (ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 1..121
- (D) OTHER INFORMATION: /function= "At position 7, N is G  
or T."

## (ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 1..121
- (D) OTHER INFORMATION: /function= "At positions 12, 20 and  
117, N is C or G."

## (ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 1..121
- (D) OTHER INFORMATION: /function= "At positions 15, 16,  
21, 29, 78, 83 and 108, N is A or G."

## (ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 1..121
- (D) OTHER INFORMATION: /function= "At positions 18, 49,  
68, 69, and 107, N is C or T."

(ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 1..121
- (D) OTHER INFORMATION: /function= "At position 114, N is C, T or A."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

TGGTGGNGGG GNAANNANTN NAACCTTCNA AGTCGATGAC GGCAGATTNN GAGTCTNCTC 60  
 CCTTTGGNNG CTCGGGANCC CCNCCACAGG TAATGCTTTT ACGGGGNNCA TCANNTNAAA 120  
 121

T

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 121 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 1..121
- (D) OTHER INFORMATION: /function= "At position 16, N is G or A."

(ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 1..121
- (D) OTHER INFORMATION: /function= "At position 17, N is A or T."

(ix) FEATURE:

(A) NAME/KEY: misc feature

(B) LOCATION: 1..121

(D) OTHER INFORMATION: /function= "At position 19, N is T  
or C."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

TGGTGGTGGG	GGAAGNNTNC	GAACCTTCGA	AGTCGATGAC	GGCAGATTTA	GAGTC TNCTC	60
CCTTTGGCCG	CTCGGGAACC	CCACCACAGG	TAATGCTTTT	ACGGGGGGCA	TCATATCAAA	120
						121

T